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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/594,426

09/26/2006

Hajime Adachi

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EXAMINER

WELCH, DAVID T

ART UNIT

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/594,426	<b>Applicant(s)</b> ADACHI ET AL.	
	<b>Examiner</b> DAVID T. WELCH	<b>Art Unit</b> 2628	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 26 September 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 9-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 9-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 September 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>9/26/2006</u> .   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Preliminary Amendments***

1. Applicant's preliminary amendments filed on September 26, 2006 have been entered. No claims have been amended. Claims 1-8 have been canceled. Claims 9-26 have been added. Claims 9-26 are still pending in this application, with claims 9, 15, and 21 being independent.

### ***Drawings***

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: figure 9, reference number 1000 and figure 10, reference number 1100. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Objections***

3. Claims 14, 20, and 26 are objected to because of a minor typographical error: “a first end-face data representing an end face a first three-dimensional object” should be amended to read --a first end-face data representing an end face **of** a first three-dimensional object--. Appropriate correction is required

***Claim Rejections - 35 USC § 101***

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claims 15-20 are rejected under 35 U.S.C. 101 as not falling within one of the four statutory categories of invention. While the claims recite a series of steps or acts to be performed, a statutory “process” under 35 U.S.C. 101 must (1) be tied to another statutory category (such as a particular apparatus), or (2) transform underlying subject matter (such as an article or material) to a different state or thing (Reference the May 15, 2008 memorandum issued by Deputy Commissioner for Patent Examining Policy, John J. Love, titled “Clarification of ‘Processes’ under 35 U.S.C. 101”). The instant claims neither transform underlying subject matter nor positively tie to another statutory category that accomplishes the claimed method steps, and therefore do not qualify as a statutory process.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 9-13, 15-19, and 21-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Senda et al (U.S. Patent Application Publication No. 2004/0176908), referred herein as Senda, in view of Nimura et al. (U.S. Patent No. 6,282,490), referred herein as Nimura.

Regarding claim 9, Senda teaches a map information creating device comprising: a geometry extracting unit that extracts geometry data from map information including a three-dimensional object indicating three-dimensional geometry configured by width and height (page 3, paragraph 48, lines 1-8; paragraph 49), the geometry data including a cross-section constituted of at least the width and the height of the three-dimensional object (figure 7; page 5, paragraph 68, lines 1-5; paragraph 69, lines 1-8); and a creating unit that creates a second three-dimensional object having geometry identical to that of the three-dimensional object based on the geometry data (page 5, paragraph 72). Senda does not explicitly teach the device, wherein the three-dimensional geometry is further configured by length. Nimura teaches a map display device that extracts stored map data and generates objects based on the data (abstract, lines 1-4), wherein the extracted geometry information includes length (figures 2A-2E; column 6, lines 16-20). Including the length of the geometric data, as taught by Nimura, is an

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essential, if not required, element of three-dimensional object creation, and, as was very well known in the art at the time of the invention, increases the realism of the rendered object since three dimensions are considered. Furthermore, Senda illustrates three dimensions such as length, width, and height, in figures 5-7, thus implicitly disclosing the requirement of a length metric. Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine the length data extraction taught by Nimura with the invention disclosed by Senda.

Regarding claim 10, Senda in view of Nimura teaches the map information creating device according to claim 9, and further teaches the device, further comprising a length extracting unit that extracts information on length of the three-dimensional object from data including information on the length (Nimura, figures 2A-2E; column 6, lines 16-20; Senda, figures 5-7; paragraph 49), wherein the creating unit creates the second three-dimensional object further based on the information on length extracted (Senda, page 5, paragraph 72; Nimura, column 7, lines 18-21).

Regarding claim 11, Senda in view of Nimura teaches the map information creating device according to claim 10, and further teaches the device, wherein the length extracting unit extracts, from network data on a road network in which a plurality of links are connected, link length information on length of a link as the information on length (Nimura, figures 2A-2E and figure 5; column 6, lines 16-20; column 7, lines 18-21), and the creating unit creates the second three-dimensional object further based on the link length information (Senda, page 5, paragraph 72; Nimura, column 7, lines 18-21).

Regarding claim 12, Senda in view of Nimura teaches the map information creating device according to claim 9, and further teaches the device, further comprising a link-direction extracting unit that extracts, from network data of a road network in which a plurality of links are connected, link direction information on direction of a link (Senda, page 3, paragraph 49, lines 1-4 and 8-10; Nimura, column 6, lines 24-26 and 31-34), wherein the creating unit creates the second three-dimensional object further based on the link direction information (Senda, page 5, paragraph 72; Nimura, column 6, lines 16-20; column 7, lines 18-21).

Regarding claim 13, Senda in view of Nimura teaches the map information creating device according to claim 9, and further teaches the device, further comprising a texture extracting unit that extracts texture information including information on a texture drawn on an arbitrary surface of the three-dimensional object, information on a representative color of the arbitrary surface (Senda, page 3, paragraph 50, lines 8-11; paragraph 53, lines 1-5), and information on a drawing cycle of the texture, from the three-dimensional object (Nimura, column 7, lines 18-23 and 56-59; the drawing cycle continues until the extracted information indicates that it should cease), wherein the creating unit creates the second three-dimensional object based on the texture information (Senda, page 5, paragraph 72).

Regarding claims 15-19, the limitations of these claims correspond to the limitations of claims 9-13, respectively; thus they are rejected on the same grounds as the limitations of claims 9-13, respectively.

Regarding claims 21-25, the limitations of these claims correspond to the limitations of claims 9-13, respectively; thus they are rejected on the same grounds as the limitations of claims 9-13, respectively.

8. Claims 14, 20, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Senda, in view of Nimura, and further in view of Nguyen et al. (U.S. Patent No. 6,084,980), referred herein as Nguyen.

Regarding claim 14, Senda in view of Nimura teaches the map information creating device according to claim 9, but does not teach the device, wherein the creating unit includes a detecting unit that detects whether a first end-face data representing an end face of a first three-dimensional object created by the creating unit and a second end-face data representing an end face of a second three-dimensional object other than the first three-dimensional object intersect with each other, and the creating unit creates a complementary three-dimensional object that complements between the first three-dimensional object and the second three-dimensional object by carrying out drawing in which peaks of the first end-face data and the second end-face data are extended, based on a result of detection by the detecting unit. Nguyen teaches a device for deriving intermediate data of cross-sectional three-dimensional data (title and abstract), wherein the device comprises a detecting unit that detects whether a first end-face data representing an end face of a first three-dimensional object created by the creating unit and a second end-face data representing an end face of a second three-dimensional object other than the first three-dimensional object intersect with each other (figures 4a-4e and figures 9b and 9d; column 5, lines 54-65;



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column 9, lines 44-49; column 12, lines 55-67; column 21, lines 27-41; column 22, lines 9-17; column 30, lines 60-61), and creates a complementary three-dimensional object that complements between the first three-dimensional object and the second three-dimensional object by carrying out drawing in which peaks of the first end-face data and the second end-face data are extended, based on a result of detection by the detecting unit (figures 4a-4e and figures 9b and 9d; column 12, lines 55-67; column 21, lines 27-41; column 22, lines 9-17; column 30, lines 62-63). As taught by Nguyen, and as was widely known in the art at the time of the invention, utilizing this method greatly improves the quality of the rendered objects because areas of the objects whose geometric sections are incident with one another are effectively smoothed out, creating a seamless, more realistic, geometric rendering. Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine the intersection detection and object peak extension disclosed by Nguyen with the invention disclosed by Senda in view of Nimura.

Regarding claims 20 and 26, the limitations of these claims correspond to the limitations of claim 14; thus they are each rejected on the same grounds as claim 14.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DAVID T. WELCH whose telephone number is (571)270-5364. The examiner can normally be reached on Monday-Thursday, and alternate Fridays, 7:30am-5:00pm EST.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Xiao Wu can be reached on (571)272-7761. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/dtw/

/XIAO M. WU/

Supervisory Patent Examiner, Art Unit 2628